

ABSTRACT

An optical pick-up actuator for optical pick-up devices is disclosed. In the actuator of this invention, the blade positioned to float above a yoke plate has one focusing coil, two tracking coils and two tilting magnets. The yoke plate has two side yokes holding two tilting coils at positions vertically aligned with the two tilting magnets. The tilting magnets are formed on the lower surface of the blade at 5 positions, which are symmetrical around the perpendicular optical path of an object lens of the blade or around the tilting axis of the blade. The tilting magnets of the blade and the tilting coils of the yoke plate are operated under the control of a solenoid. When a current flows in the tilting 10 coils, the tilting magnets generate electromagnetic fields to tilt the blade at a desired angle relative to the perpendicular optical path of the object lens. The pick-up actuator thus stably performs a blade tilting operation in addition to performing conventional focusing and tracking operation, and so 15 15 the actuator allows the object lens to precisely focus a laser beam on a disc, particularly, a high density optical DVD, and allows an optical pick-up device to precisely read or write information from or onto the disc even when the disc is inclinedly positioned in the deck of a disc player.

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